



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
Reuel S. Orocio )  
Serial No. 10/047,865 ) Examiner: Edgar, Richard A.  
Filed: January 15, 2002 ) Art Unit: 3745  
For: IMPELLER AND METHOD OF ) Date: February 18, 2004  
MANUFACTURING SAME )

APPELLANT BRIEF

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

This is an appeal from the FINAL rejection from Claims 1 and 2 of the subject application by Examiner Richard A. Edgar, of Art Unit 3745. Enclosed, herewith, is the second half of the appeal fee in the amount of \$165. If for any reason this amount is deficient, the Patent Office may charge the deficient amount to deposit account No. 13-4899. The Patent Office also has the right to credit any overpayment to deposit account No. 13-4899.

02/24/2004 JADD01 00000056 10047865

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REAL PARTY IN INTEREST

The subject application has been assigned to Aqua-Flo, Incorporated of 5651 Schaefer Avenue, Chino, California 91710, which is the real party in interest of the subject application.

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RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

STATUS OF CLAIMS

Claims 1 and 2 are pending in this application. Claims 3-6 have been canceled. Claims 1 and 2 are being appealed.

STATUS OF AMENDMENTS

An amendment was filed on the subject application on November 3, 2003. This amendment was considered by the Examiner which resulted in the production of the FINAL rejection dated November 24, 2003.

SUMMARY OF THE INVENTION

A method of manufacturing a pump impeller (34) and a pump impeller which is constructed in a single molding operation (page 3, lines 1-5). The pump impeller has a shroud (36) which includes an inlet opening (40) located on one side of a series of vanes (42). On the opposite side of the series of vanes is a hub (44) and from the hub extends a shaft sleeve (16). The axis of rotation of the shaft sleeve aligns with the longitudinal center axis of the inlet opening.

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### ISSUES

Claims 1 and 2 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0106277A1, Chapman, in view of U.S. Patent No. 5,927,947, Botros.

### GROUPING OF CLAIMS

Each of the claims that are being appealed stand alone by themselves. These claims are not grouped together.

### ARGUMENT

The Examiner has stated that the reference to Chapman shows a shroud that has a centrally located annular inlet ring which provides an inlet to an eye of the impeller. This ring 17 of Chapman is mounted on the shroud but extends radially outward from the longitudinal center axis of the impeller. The ring 17 is not an inlet ring and is actually spaced some distance from the inlet. The ring 17 does not provide an inlet to the eye of the impeller. The only reason for the ring 17 of Chapman is to provide a longer and more resistive flow path for the recirculating flow thus reducing the amount of flow recirculating back from the outlet to the impeller

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inlet. In other words, the ring 17 of Chapman is really a backflow preventing device between the outlet and the inlet. The ring 17 of Chapman does not provide an inlet to an eye of an impeller. Claim 2 specifically defines that the annular inlet ring provides an inlet to the eye of the impeller.

Additionally, Claim 2 defines that a sleeve protrudes outwardly from the shroud in one direction where the annular inlet ring protrudes outwardly in another direction with these directions being opposite. This specific feature is also defined within Claim 1. The sleeve shown in Figures 6-9 of Chapman extends precisely in the same direction as the ring 17, parallel but spaced apart. In Chapman, both the sleeve and the ring 17 protrude in the same direction. Claim 2 specifically defines that the sleeve protrudes outwardly from the shroud in a second direction with this second direction being opposite the first direction. No such opposite directional relationship is shown or suggested by Chapman.

However, the Examiner has cited the reference to Botros as disclosing a one-piece molded impeller which comprises a drive sleeve which fits onto a shaft of a motor. The impeller includes an inlet ring which is connected to the blades and the Examiner states that the drive sleeve and the inlet ring extend in opposite directions. It is agreed that within the fan of Botros, there is a drive sleeve that, in essence, extends in the opposite direction from an annular inlet ring. The Examiner

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has stated that it would be obvious to a person of ordinary skill in the art to modify the drive sleeve of Chapman as taught by Botros. This modification is just not understood by appellant.

The drive sleeve in Chapman is located within the inlet area where within the present invention the drive sleeve is located not in the inlet or the outlet. If Chapman was modified by Botros by putting the inlet ring opposite the drive sleeve, then that inlet ring would fall within the confines of the location of the motor and the resultingly inlet ring would be nowhere near the inlet to the pump of Chapman. The only way that Botros could be combined with Chapman would be by one of ordinary skill in the art becoming familiar with the present invention. And even if one were familiar with the present invention, the combining of the two references would be, at best, remote. As was stated within *In re Murray et al.*, 122 USPQ 364, the question of obviousness must be approached without recourse to applicant's disclosure. As also was stated within *In re Warner*, 154 USPQ 173, a basic mandate inherent in 35 U.S.C. §103 is that piecemeal reconstruction of prior art patents in light of the appellant's disclosure should not be the basis for the conclusion of obviousness. The modifying of Chapman by Botros is strictly due to the disclosure of appellant's own invention. In other words, appellant's own invention is being used as a reference in making this rejection. This type of rejection

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has been notoriously not accepted under the Patent Law.

In conclusion, it is believed that the structure as now defined in Claims 1 and 2 is patentably distinctive over that of the combined references of Chapman and Botros and that these claims should be allowed.

#### APPENDIX

Claim 1.(previously amended) A method of manufacturing a pump impeller comprising:

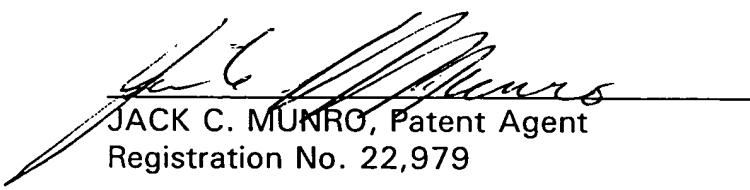
forming in a single molding operation a shroud, vanes and shaft sleeve so as to precisely obtain alignment of an axis of rotation of said sleeve with a longitudinal center axis of an annular inlet ring mounted on said shroud where said annular inlet ring and said sleeve are on opposite sides of said shroud and protrude in opposite directions from said shroud, whereby during rotation of said impeller smooth, efficient substantially noise-free operation is obtained because said sleeve is in balance with said annular inlet ring.

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Claim 2.(previously amended) A pump impeller comprising:  
a series of vanes having an outer end which is integrally mounted on a shroud, said shroud having a centrally located annular inlet ring which provides an inlet to an eye of said impeller, said annular inlet ring protruding outwardly in a first direction from said shroud; and

a hub integrally connected to an inner end of said vanes, said hub having an integral sleeve connected thereto, said sleeve protruding outwardly from said shroud in a second direction, said second direction being opposite said first direction, said sleeve having an axis of rotation, said inlet having a longitudinal center axis, said axis of rotation being aligned with said longitudinal center axis, whereby rotation of said impeller produces essentially no vibration with said impeller rotating smoothly, efficiently and substantially noise-free.

Respectfully submitted,

  
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